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File 155:MEDLINE(R) 1966-2002/Jul W1

File 5:Biosis Previews(R) 1969-2002/Jul W1

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File 315:ChemEng & Biotec Abs 1970-2001/Dec

(c) 2002 DECHEMA

File 73:EMBASE 1974-2002/Jul W1

(c) 2002 Elsevier Science B.V.

File 399:CA SEARCH(R) 1967-2002/UD=13626

(c) 2002 AMERICAN CHEMICAL SOCIETY

File 351:Derwent WPI 1963-2002/UD,UM &UP=200244

(c) 2002 Thomson Derwent

?ds

Set	Items	Description
S1	131	AU=ANTRIM R? OR AU=ANTRIM, R?
S2	35	AU=BARRESI F? OR AU=BARRESI, F?
S3	1533	MALTO()OLIGOSACCHARIDE? ?
S4	4617	MALTODEXTRIN? ? OR MALTO()DEXTRIN? ?
S5	91196	OLIGOSACCHARIDE? ?
S6	177140	POLYSACCHARIDE? ?
S7	1098893	CATALYS?
S8	195989	HYDROGENAT?
S9	50040	DP OR (DEGREE(3N) (POLYMERIZ? OR POLYMERIS?))
S10	3423141	DE
S11	8	(S1 OR S2) AND S8
S12	8	RD S11 (unique items)
S13	407310	CATALYT?
S14	119	(S3-S6) AND (S8 (5N) (S7 OR S13))
S15	116	RD S14 (unique items)
S16	8	S15 AND S9
S17	8	RD S16 (unique items)
S18	577	DEXTROSE(3N)EQUIVALENT? ?
S19	6	S18 AND S15
S20	6	RD S19 (unique items)
S21	14	S12 OR S17 OR S20
S22	8	S15 AND (PRESSURE? ? OR PSI)
S23	8	RD S22 (unique items)
S24	19	S21 OR S23
S25	8	S15 (5N) (REDUCE? OR REDUCTION? ?)
S26	23	S24 OR S25
S27	150392	STARCH?
S28	67	S27 AND (S8 (5N) (S7 OR S13))
S29	64	RD S28 (unique items)
S30	8	S29 AND S9
S31	8	RD S30 (unique items)
S32	7	S29 AND S18
S33	10	S29 AND (PRESSURE? ? OR PSI)
S34	6	S29 (5N) (REDUCE? OR REDUCTION? ?)
S35	19	S31-S34
S36	35	S35 OR S26

?t 36/7/all

36/7/1 (Item 1 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)

11087230 21085792 PMID: 11217972

Synthesis, analysis and reduction of 2-nitropropyl starch .

Heeres A; van Doren H A; Gotlieb K F; Bleeker I P; Bergsma J; Kellogg R M  
TNO Nutrition and Food Research Institute, Zeist, The Netherlands.

Carbohydrate research (Netherlands) Jan 30 2001, 330 (2) p191-204,  
ISSN 0008-6215 Journal Code: 0043535

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Granular 2-nitropropyl potato starch was synthesized by reaction with 2-nitropropyl acetate in an aqueous suspension. Nitroalkylation occurs preferentially with the amylose fraction of potato starch, as was confirmed by leaching experiments and digestion of the modified starch with alpha-amylase. The 2-nitropropyl substituent is a mixture of the nitroalkane and nitronic acid tautomer. Some grafting occurs and to a lesser extent additional reactions (formation of carbonyls and oximes) of the nitro group take place. After catalytic hydrogenation of water soluble 2-nitropropyl starch only a small amount of the nitro functionality was reduced to the corresponding amine. Reduction of granular 2-nitropropyl starch with sodium dithionite did not go to completion and led to a complex mixture of starting material, several intermediates and side products (for example sulfamates).

Record Date Created: 20010219

36/7/2 (Item 1 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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13680066 BIOSIS NO.: 200200308887

Derivatized reduced malto - oligosaccharides .

AUTHOR: Antrim Richard L (a); Barresi Frank W

AUTHOR ADDRESS: (a)Solon, IA\*\*USA

JOURNAL: Official Gazette of the United States Patent and Trademark Office  
Patents 1257 (5):pNo Pagination Apr. 30, 2002

MEDIUM: e-file

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: Disclosed are derivatized malto - oligosaccharides and methods for the preparation thereof. In accordance with the disclosed invention, a malto - oligosaccharide is hydrogenated to thereby obtain a hydrogenated malto - oligosaccharide, and the resulting hydrogenated malto - oligosaccharide is derivatized, such as via oxidation, esterification, etherification, or enzymatic modification. The derivatization of such hydrogenated malto - oligosaccharides results in a surprisingly low level of a formation of by-products and products of degradation. In a particularly preferred embodiment of the invention, a mixture of malto - oligosaccharides is catalytically hydrogenated under reaction conditions suitable to substantially preserve the degree of polymerization ( DP ) profile of the mixture. The resulting malto - oligosaccharide mixture then is derivatized to form a derivatized malto - oligosaccharide mixture.

36/7/3 (Item 1 from file: 315)  
DIALOG(R)File 315:ChemEng & Biotec Abs  
(c) 2002 DECHEMA. All rts. reserv.

462676 CEABA Accession No.: 30-08-012098 DOCUMENT TYPE: Journal  
Title: Factors affecting the hydrogenation of fructose with a water-soluble  
ruthenium-TPPTS complex. A comparison between homogeneous and  
heterogeneous catalysis.

AUTHOR: Heinen, A. W. ; Papadogianakis, G. ; Sheldon, R. A. ; Peters, J.  
A. ; Bekkum, H. van

CORPORATE SOURCE: Delft Univ. Technol. Lab. Org. Chem. Catalysis 2628 BL  
Delft Netherlands

JOURNAL: J. Mol. Catal. A: Chem., Volume: 142, Issue: 1, Page(s): 17-26  
ISSN: 13811169

PUBLICATION DATE: 20 May 1999 (19990520) LANGUAGE: English

ABSTRACT: The hydrogenation of fructose as a model compound for inulin was  
studied using a water-soluble, homogeneous ruthenium-TPPTS [TPPTS =  
tris(m-sulfonatophenyl)phosphine trisodium salt] as the ligand. The  
effects of temperature, pressure, catalyst/substrate and ligand/metal  
ratios on the activity and selectivity were investigated. The reaction  
is homogeneously catalysed, despite the formation of some Ru particles  
at above 90.degree.C. Addition of HCl or salts (NaCl, NaI or CaCl2)  
increased the selectivity to D-glucitol and the catalytic activity.

36/7/4 (Item 1 from file: 399)  
DIALOG(R)File 399:CA SEARCH(R)  
(c) 2002 AMERICAN CHEMICAL SOCIETY. All rts. reserv.

136069107 CA: 136(5)69107j PATENT  
Catalytic hydrogenation of maltooligosaccharides  
INVENTOR(AUTHOR): Antrim, Richard L.; Barresi, Frank W.  
LOCATION: USA  
ASSIGNEE: Grain Processing Corporation  
PATENT: European Pat. Appl. ; EP 1172368 A1 DATE: 20020116  
APPLICATION: EP 2001305247 (20010615) \*US 614961 (20000713)  
PAGES: 18 pp. CODEN: EPXXDW LANGUAGE: English CLASS: C07H-003/06A;  
C08B-030/18B DESIGNATED COUNTRIES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IT;  
LI; LU; NL; SE; MC; PT; IE; SI; LT; LV; FI; RO

SECTION:  
CA217006 Food and Feed Chemistry  
CA244XXX Industrial Carbohydrates  
IDENTIFIERS: maltooligosaccharide catalytic hydrogenation  
DESCRIPTORS:  
Hydrogenation catalysts... Hydrogenation... Maltooligosaccharides...  
Thermal stability...

catalytic hydrogenation of maltooligosaccharides  
CAS REGISTRY NUMBERS:  
9050-36-6 catalytic hydrogenation of maltooligosaccharides  
7440-02-0 uses, activated; catalytic hydrogenation of  
maltooligosaccharides  
7440-05-3 7440-06-4 7440-16-6 7440-18-8 uses, catalytic hydrogenation  
of maltooligosaccharides

36/7/5 (Item 2 from file: 399)  
DIALOG(R)File 399:CA SEARCH(R)

(c) 2002 AMERICAN CHEMICAL SOCIETY. All rts. reserv.

134178760 CA: 134(13)178760w PATENT  
Preparation and mass spectra of derivatized reduced  
malto-oligosaccharides  
INVENTOR(AUTHOR): Antrim, Richard L.; Barresi, Frank W.  
LOCATION: USA  
ASSIGNEE: Grain Processing Corporation  
PATENT: PCT International ; WO 0114394 A2 DATE: 20010301  
APPLICATION: WO 2000US40687 (20000818) \*US 378673 (19990820)  
PAGES: 33 pp. CODEN: PIXXD2 LANGUAGE: English CLASS: C07H-000/A  
DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; BZ;  
CA; CH; CN; CR; CU; CZ; DE; DK; DM; DZ; EE; ES; FI; GB; GD; GE; GH; GM; HR;  
HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MA;  
MD; MG; MK; MN; MW; MX; MZ; NO; NZ; PL; PT; RO; RU; SD; SE; SG; SI; SK; SL;  
TJ; TM; TR; TT; TZ; UA; UG; US; UZ; VN; YU; ZA; ZW; AM; AZ; BY; KG; KZ; MD;  
RU; TJ; TM DESIGNATED REGIONAL: GH; GM; KE; LS; MW; MZ; SD; SL; SZ; TZ; UG  
; ZW; AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LU; MC; NL; PT;  
SE; BF; BJ; CF; CG; CI; CM; GA; GN; GW; ML; MR; NE; SN; TD; TG  
SECTION:  
CA233004 Carbohydrates  
CA222XXX Physical Organic Chemistry  
IDENTIFIERS: maltose oligosaccharide oxidn hydrogenation prepn mass  
spectra  
DESCRIPTORS:  
Hydrogenation... Maltooligosaccharides...  
prep. and mass spectra of derivatized reduced malto-oligosaccharides  
CAS REGISTRY NUMBERS:  
9050-36-6D derivatized, prep. and mass spectra of derivatized reduced  
malto-oligosaccharides

36/7/6 (Item 3 from file: 399)  
DIALOG(R)File 399:CA SEARCH(R)  
(c) 2002 AMERICAN CHEMICAL SOCIETY. All rts. reserv.

131103706 CA: 131(8)103706n PATENT  
Reduced maltooligosaccharides and their manufacture  
INVENTOR(AUTHOR): Barresi, Frank W.; Antrim, Richard L.  
LOCATION: USA  
ASSIGNEE: Grain Processing Corporation  
PATENT: PCT International ; WO 9936442 A1 DATE: 19990722  
APPLICATION: WO 99US1098 (19990119) \*US 71905 (19980120)  
PAGES: 59 pp. CODEN: PIXXD2 LANGUAGE: English CLASS: C08B-030/18A  
DESIGNATED COUNTRIES: AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; CA; CH; CN;  
CU; CZ; DE; DK; EE; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP;  
KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MD; MG; MK; MN; MW; MX; NO;  
NZ; PL; PT; RO; RU; SD; SE; SG; SI; SK; SL; TJ; TM; TR; TT; UA; UG; US; UZ;  
VN; YU; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM DESIGNATED REGIONAL: GH; GM  
; KE; LS; MW; SD; SZ; UG; ZW; AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR;  
IE; IT; LU; MC; NL; PT; SE; BF; BJ; CF; CG; CI; CM; GA; GN; GW; ML; MR; NE;  
SN; TD; TG  
SECTION:  
CA244006 Industrial Carbohydrates  
IDENTIFIERS: maltooligosaccharide hydrogenation discoloration prevention,  
reduced maltooligosaccharide heat resistance  
DESCRIPTORS:

Maltooligosaccharides...

hydrogenated; hydrogenation of maltooligosaccharide for products with low color and high thermal stability

Hydrogenation...

hydrogenation of maltooligosaccharide for products with low color and high thermal stability

CAS REGISTRY NUMBERS:

9050-36-6DP hydrogenated, hydrogenation of maltooligosaccharide for products with low color and high thermal stability

36/7/7 (Item 4 from file: 399)

DIALOG(R) File 399:CA SEARCH(R)

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122158788 CA: 122(13)158788k PATENT

Manufacture of xylooligosaccharides and their reduction products with xylanase

INVENTOR(AUTHOR): Horitsu, Hiroaki

LOCATION: Japan,

ASSIGNEE: Towa Kasei Kogyo Kk

PATENT: Japan Kokai Tokkyo Koho ; JP 94343486 A2 ; JP 06343486 DATE: 941220

APPLICATION: JP 93154552 (930602)

PAGES: 5 pp. CODEN: JKXXAF LANGUAGE: Japanese CLASS: C12P-019/14A; C07H-003/06

SECTION:

CA216005 Fermentation and Bioindustrial Chemistry

CA233XXX Carbohydrates

IDENTIFIERS: xylooligosaccharide manuf xylanase Aeromonas Enterobacter, hemicellulose hydrolysis xylanase Aeromonas Enterobacter, redn xylooligosaccharide hydrogenation catalyst

DESCRIPTORS:

Hydrogenation catalysts... Hydrogenation, biochem....

manuf. of xylooligosaccharide redn. products from hemicellulose with microbial xylanase and hydrogenation catalysts

Aeromonas caviae... Enterobacter agglomerans...

Oligosaccharides, xylose-contg....

manuf. of xylooligosaccharides and their redn. products from hemicellulose with xylanase from Aeromonas caviae and/or Enterobacter agglomerans

CAS REGISTRY NUMBERS:

9014-63-5 9034-32-6 22416-58-6P 37278-89-0P 47592-59-6P 49694-20-4P  
manuf. of xylooligosaccharides and their redn. products from hemicellulose with xylanase from Aeromonas caviae and/or Enterobacter agglomerans

7440-02-0 uses, hydrogenation catalyst; manuf. of xylooligosaccharide redn. products from hemicellulose with microbial xylanase and hydrogenation catalysts

36/7/8 (Item 5 from file: 399)

DIALOG(R) File 399:CA SEARCH(R)

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111154295 CA: 111(17)154295x PATENT

Reduced chitosan oligosaccharides and a process for their preparation

INVENTOR(AUTHOR): Izume, Masato; Nagae, Shinichi  
LOCATION: Japan,  
ASSIGNEE: Katakura Chikkarin Co., Ltd.  
PATENT: Japan Kokai Tokkyo Koho ; JP 8979194 A2 ; JP 0179194 DATE:  
890324

APPLICATION: JP 87234904 (870921)  
PAGES: 10 pp. CODEN: JKXXAF LANGUAGE: Japanese CLASS: C07H-015/04A;  
C08B-037/08B; C07H-003/06

SECTION:  
CA233004 Carbohydrates  
CA205XXX Agrochemical Bioregulators  
CA217XXX Food and Feed Chemistry  
CA262XXX Essential Oils and Cosmetics  
CA263XXX Pharmaceuticals  
IDENTIFIERS: reduced chitosan oligosaccharide, catalytic hydrogenation  
chitosan oligosaccharide

DESCRIPTORS:  
Food...  
additives for, reduced chitosan oligosaccharides as  
Bacillus...  
chitosanase from, degrdn. of chitosan by  
Hydrogenation catalysts...  
Raney nickel or ruthenium, for chitosan oligosaccharides  
Agrochemicals... Cosmetics... Pharmaceuticals...  
reduced chitosan oligosaccharides for  
Oligosaccharides...  
reduced, prepn. of, by catalytic hydrogenation of chitosanase-treated  
chitosan

CAS REGISTRY NUMBERS:  
13815-94-6 catalyst, for hydrogenation of chitosan oligosaccharides  
9012-76-4 deacetylated, degrdn. of, by chitosanase  
51570-20-8 from Bacillus sp., degrdn. of chitosan by  
7440-02-0 7440-18-8 uses and miscellaneous, catalyst, for hydrogenation  
of chitosan oligosaccharides

36/7/9 (Item 1 from file: 351)  
DIALOG(R)File 351:Derwent WPI  
(c) 2002 Thomson Derwent. All rts. reserv.

014303628  
WPI Acc No: 2002-124331/200217  
Reduction of malto - oligosaccharide mixtures to zero dextrose  
equivalent involves catalytically hydrogenating malto -  
oligosaccharide mixture under predetermined hydrogenation conditions  
Patent Assignee: GRAIN PROCESSING CORP (GRAI )  
Inventor: ANTRIM R L ; BARRESI F W  
Number of Countries: 029 Number of Patents: 004  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1172368	A1	20020116	EP 2001305247	A	20010615	200217 B
CA 2350434	A1	20020113	CA 2350434	A	20010614	200219
JP 2002047296	A	20020212	JP 2001183885	A	20010618	200227
BR 200102570	A	20020430	BR 20012570	A	20010626	200237

Priority Applications (No Type Date): US 2000614961 A 20000713  
Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 1172368 A1 E 18 C07H-003/06

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT  
LI LT LU LV MC MK NL PT RO SE SI TR

CA 2350434 A1 E C07H-003/06

JP 2002047296 A 14 C07H-003/06

BR 200102570 A C08B-030/18

Abstract (Basic): EP 1172368 A1

NOVELTY - A mixture of malto - oligosaccharide species is reduced to a dextrose equivalent of zero by providing a malto - oligosaccharide mixture, and catalytically hydrogenating this mixture under hydrogenation conditions, i.e., under at least 1500 psi , to preserve the degree of polymerization profile of the mixture.

USE - For reducing malto - oligosaccharide mixtures to essentially zero dextrose equivalents , useful as cryoprotectants for freezing biological samples, e.g., cells, tissue, protein, DNA or other samples.

ADVANTAGE - The reduced mixture has a superior color-fastness and thermal stability as compared to a similar unreduced mixture of malto - oligosaccharides , and also low reactivity towards nitrogen-containing species. The reduced malto - oligosaccharides function well as cryoprotectants, and the reduced reactivity protects against reaction with proteins and other nitrogen-containing species.

pp; 18 DwgNo 0/0

Derwent Class: D17

International Patent Class (Main): C07H-003/06; C08B-030/18

International Patent Class (Additional): C07B-061/00

36/7/10 (Item 2 from file: 351)

DIALOG(R)File 351:Derwent WPI

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013851436

WPI Acc No: 2001-335649/200135

Cleaning composition used as laundry detergent comprising cleansing agent and reduced malto - oligosaccharide

Patent Assignee: GRAIN PROCESSING CORP (GRAI ); ANTRIM R L (ANTR-I);

BARRESI F W (BARR-I); FREERS S O (FREE-I)

Inventor: ANTRIM R L ; BARRESI F W ; FREERS S O

Number of Countries: 095 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200129164	A1	20010426	WO 2000US29141	A	20001020	200135 B
AU 200110998	A	20010430	AU 200110998	A	20001020	200148
EP 1141193	A1	20011010	EP 2000972319	A	20001020	200167
			WO 2000US29141	A	20001020	
US 20020072483	A1	20020613	US 99160602	P	19991020	200243
			WO 2000US29141	A	20001020	
			US 2001801352	A	20010307	

Priority Applications (No Type Date): US 99160602 P 19991020; US 2001801352  
A 20010307

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200129164 A1 E 23 C11D-003/22

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA  
CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP  
KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT  
RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR  
IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW

AU 200110998 A C11D-003/22 Based on patent WO 200129164

EP 1141193 A1 E C11D-003/22 Based on patent WO 200129164

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT  
LI LT LU LV MC MK NL PT RO SE SI

US 20020072483 A1 A61K-007/50 Provisional application US 99160602

Cont of application WO 2000US29141

Abstract (Basic): WO 200129164 A1

NOVELTY - A cleaning composition comprises a cleansing agent, and a  
reduced malto - oligosaccharide .

USE - As laundry detergent, i.e. bar soap, powdered laundry-type  
detergent, or liquid laundry detergent.

ADVANTAGE - The cleaning composition provides superior  
colorfastness, thickening ability, mildness, textural feel, and  
structural integrity, as well as increased billet density and enhanced  
shelf life stability.

pp; 23 DwgNo 0/4

Derwent Class: D16; D25

International Patent Class (Main): A61K-007/50; C11D-003/22

International Patent Class (Additional): C11D-009/26

36/7/11 (Item 3 from file: 351)

DIALOG(R)File 351:Derwent WPI

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013773419

WPI Acc No: 2001-257630/200126

Derivatized malto - oligosaccharide useful as e.g. encapsulant,  
acidulant, flocculant, adhesive, antiredeposition agent or detergent  
builder is prepared by hydrogenating and then derivatizing a malto -  
oligosaccharide

Patent Assignee: GRAIN PROCESSING CORP (GRAI )

Inventor: ANTRIM R L ; BARRESI F W

Number of Countries: 095 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200114394	A2	20010301	WO 2000US40687	A	20000818	200126 B
AU 200080328	A	20010319	AU 200080328	A	20000818	200136
EP 1144424	A2	20011017	EP 2000971032	A	20000818	200169
			WO 2000US40687	A	20000818	
KR 2001080250	A	20010822	KR 2001704923	A	20010419	200213
US 6380379	B1	20020430	US 99378673	A	19990820	200235

Priority Applications (No Type Date): US 99378673 A 19990820

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200114394 A2 E 33 C07H-000/00

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA



CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP  
KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT  
RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR  
IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW

AU 200080328 A C07H-000/00 Based on patent WO 200114394

EP 1144424 A2 E C07H-001/00 Based on patent WO 200114394

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT  
LI LT LU LV MC MK NL RO SI

KR 2001080250 A C08B-030/18

US 6380379 B1 C08B-031/00

Abstract (Basic): WO 200114394 A2

NOVELTY - A derivatized malto - oligosaccharide is prepared by  
hydrogenating and then derivatizing a malto - oligosaccharide .

USE - The derivatized malto - oligosaccharides are used as  
encapsulants, acidulants, flocculants, adhesives, antiredeposition  
agents and detergent builders etc.

ADVANTAGE - Byproduct formation and formation of products of  
degradation are decreased compared to known derivitization reactions.  
Yields and ease of purification are improved. The change of DP upon  
derivitization is smaller than when using unreduced malto -  
oligosaccharides .

pp; 33 DwgNo 0/0

Derwent Class: D15; D23; D25; E13; G03

International Patent Class (Main): C07H-000/00; C07H-001/00; C08B-030/18;  
C08B-031/00

36/7/12 (Item 4 from file: 351)

DIALOG(R)File 351:Derwent WPI

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013515047

WPI Acc No: 2000-686993/200067

Heat stable iron oxide complexes with derivatized polysaccharide for use  
in plasma extenders and as enhanced magnetic resonance imaging agents

Patent Assignee: ADVANCED MAGNETICS INC (ADMA-N)

Inventor: BENGELE H; FRIGO T B; GROMAN E V; LEWIS J M; PAUL K G

Number of Countries: 020 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200061191	A2	20001019	WO 2000US6047	A	20000308	200067 B
EP 1169062	A2	20020109	EP 2000914867	A	20000308	200205
			WO 2000US6047	A	20000308	

Priority Applications (No Type Date): US 99128579 P 19990409

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200061191 A2 E 74 A61K-047/48

Designated States (National): JP

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU  
MC NL PT SE

EP 1169062 A2 E A61K-047/48 Based on patent WO 200061191

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI  
LU MC NL PT SE

Abstract (Basic): WO 200061191 A2

NOVELTY - Providing an iron oxide complex for administration to a mammal comprises (i) producing an optionally derivatized polysaccharide iron complex; and (ii) sterilizing the complex by autoclaving.

DETAILED DESCRIPTION - Providing an iron oxide complex for administration to a mammal comprises (i) producing an optionally derivatized polysaccharide iron complex; and (ii) sterilizing the complex by autoclaving. INDEPENDENT CLAIMS are also included for:

(a) a method of formulating a dextran composition for pharmacological use, the composition having (i) decreased toxicity or (ii) increased pH stability compared to native dextran comprises reacting a dextran with a borohydride salt or hydrogen in the presence of a hydrogenation catalyst;

(b) an improved method of administering a polysaccharide composition with reduced toxicity comprises using an optionally carboxymethylated reduced polysaccharide in the formulation;

(c) a reduced polysaccharide iron complex stable at at least 100degreesC; and

(d) a method of providing (1) a contrast agent for in vivo MRI of a subject or (2) a hematinic agent for treating a subject deficient in iron comprising (i) formulating a composition which is a carboxymethylated reduced coated ultrasmall superparamagnetic iron oxide colloid; and (ii) terminally sterilizing the composition by autoclaving.

USE - Reduced polysaccharide is useful as a plasma extender. Reduced polysaccharide iron complex is useful for enhanced magnetic resonance imaging (MRI) of a tissue or organ, as a hematinic agent for treating a subject deficient in iron (preferably a cancer patient, gastroenteritis patient or erythropoietin recipient) (claimed) or for other applications such as magnetic fractionation of cells, immunoassays and magnetic targeted drug delivery.

ADVANTAGE - Complex has reduced toxicity or increased pH stability and can be sterilized by autoclaving so are suitable for long term storage at ambient temperatures.

pp; 74 DwgNo 0/9

Derwent Class: A96; B04

International Patent Class (Main): A61K-047/48

International Patent Class (Additional): A61K-049/00

36/7/13 (Item 5 from file: 351)

DIALOG(R)File 351:Derwent WPI

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013447818

WPI Acc No: 2000-619761/200060

Production of surfactant alcohols and ethers by dimerization of olefin mixture, conversion to primary alcohol and optional alkoxylation uses feed based on hexene isomer mixture containing linear isomer

Patent Assignee: BASF AG (BADI )

Inventor: JAEGER H; MAAS H; ROEPER M; SCHULZ R; TROPSCH J; WALTER M

Number of Countries: 093 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 19912418	A1	20000921	DE 1012418	A	19990319	200060 B
WO 200056683	A1	20000928	WO 2000EP2416	A	20000317	200060
AU 200038130	A	20001009	AU 200038130	A	20000317	200103

EP 1163196 A1 20011219 EP 2000916975 A 20000317 200206  
 WO 2000EP2416 A 20000317  
 KR 2001113039 A 20011224 KR 2001711862 A 20010918 200240

Priority Applications (No Type Date): DE 1012418 A 19990319

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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DE 19912418	A1		10	C07C-029/132	
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WO 200056683	A1	G		C07C-002/10	
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Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY CA CH  
 CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE  
 KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU  
 SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR  
 IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW

AU 200038130	A			C07C-002/10	Based on patent WO 200056683
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EP 1163196	A1	G		C07C-002/10	Based on patent WO 200056683
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Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT  
 LI LT LU LV MC MK NL PT RO SE SI

KR 2001113039	A			C07C-041/03	
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Abstract (Basic): DE 19912418 A1

NOVELTY - In the production of surfactant alcohols (I), with especially advantageous ecotoxicity and biodegradability, and corresponding surfactant alcohol ethers (II) by (i) dimerizing olefin mixtures, (ii) conversion to primary alcohols and optionally (iii) alkoxylation, the olefin mixture used contains 30-80 wt.% linear hexene isomer and a total of at least 60 wt.% hexene isomers.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for

(a) olefin mixtures produced by stage (i);

(b) (I) and (II) obtained by stages (i), (ii) and optionally (iii).

USE - The alkoxylation products (II) are used as nonionic surfactants; the alcohols (I) are used in the production of surfactants or alkanol glycoside and polyglycoside mixtures by (repeated) reaction with mono-, di- or polysaccharides with exclusion of water, using acid catalysis, or with O-acetylsaccharide halides; and (I) and (II) are used for the production of surfactive sulfates or phosphates by esterification with sulfuric or phosphoric acid (derivatives) to acid alkyl (ether) sulfates or phosphates (all claimed).

ADVANTAGE - The process avoids the use of relatively costly ethylene as starting material, as no 3 or 4 carbon olefin stream is used as dimerization feed. The alcohols (I) and their ethers (II) have favorable ecotoxicity and biodegradability.

pp; 10 DwgNo 0/0

Derwent Class: A97; D25; E11; E17

International Patent Class (Main): C07C-002/10; C07C-029/132; C07C-041/03

International Patent Class (Additional): C07C-002/08; C07C-011/00;

C07C-011/02; C07C-027/22; C07C-029/16; C07C-031/02; C07C-031/125;

C07C-043/13; C07C-303/24; C07F-009/09; C07F-009/11; C07H-001/00;

C08B-001/00; C11D-001/72

36/7/14 (Item 6 from file: 351)

DIALOG(R)File 351:Derwent WPI

(c) 2002 Thomson Derwent. All rts. reserv.

013310350

WPI Acc No: 2000-482287/200042

Manufacture of lactitol syrup e.g. for confectionery, comprises forming mixture of lactose and glucose syrup, and subjecting the mixture to catalytic hydrogenation using catalyst and hydrogenation medium, resulting in lactitol syrup

Patent Assignee: ROQUETTE FRERES SA (ROQF -)

Inventor: WILSON L L

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6090429	A	20000718	US 97828024	A	19970327	200042 B

Priority Applications (No Type Date): US 97828024 A 19970327

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 6090429	A	5	A23L-001/236	

Abstract (Basic): US 6090429 A

NOVELTY - Lactitol syrup is manufactured without requiring the crystallization step.

DETAILED DESCRIPTION - Manufacture of a lactitol syrup comprises:

(a) forming a mixture of lactose and a glucose syrup; and

(b) subjecting the mixture to catalytic hydrogenation using a catalyst and a hydrogenation medium, under a pressure and at a temperature suitable for hydrogenating lactose, resulting in a lactitol syrup, where the dry matter of lactose is at least 30%, and the richness in lactose is 30 - 90%, and the glucose syrup has a dextrose equivalent of 20 - 40.

An INDEPENDENT CLAIM is also included for manufacturing a dehydrated lactitol product.

USE - Used in foods such as confectionery, creams, cream-based desserts, ice-cream, pastries, beverages, jams, sauces. Also used in the pharmaceutical industry, dietetic or health care products such as exilirs, cough syrups, lozenges or tablets, especially suitable in diabetes products, chewy pastes, chewing gum, pastilles, oral health solutions, dentifrices in paste, gel or liquid form or veterinary products, animal fodder.

ADVANTAGE - Lactitol is not cariogenic, is chemically stable and lower in calories than sucrose.

pp; 5 DwgNo 0/0

Derwent Class: D13

International Patent Class (Main): A23L-001/236

36/7/15 (Item 7 from file: 351)

DIALOG(R)File 351:Derwent WPI

(c) 2002 Thomson Derwent. All rts. reserv.

013101354

WPI Acc No: 2000-273225/200024

New mesophilic enzyme from Arthrobacter, used to convert starch hydrolyzate into non-reducing sugars, particularly trehalose, useful as a sweetener in foods, pharmaceuticals and cosmetics

Patent Assignee: HAYASHIBARA SEIBUTSU KAGAKU (HAYB )

Inventor: FUKUDA S; KUBOTA M; MARUTA K; MIYAKE T; YAMAMOTO T

Number of Countries: 030 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 990704	A2	20000405	EP 99307220	A	19990913	200024 B
AU 9947533	A	20000316	AU 9947533	A	19990910	200024
CN 1252442	A	20000510	CN 99123896	A	19990910	200036
JP 2000228980	A	20000822	JP 9916931	A	19990126	200045
BR 9904104	A	20001017	BR 994104	A	19990913	200056
KR 2000023095	A	20000425	KR 9938890	A	19990911	200107

Priority Applications (No Type Date): JP 9916931 A 19990126; JP 98258394 A 19980911; JP 98352252 A 19981211

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 990704	A2	E	93	C12N-015/54	
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT					
LI LT LU LV MC MK NL PT RO SE SI					
AU 9947533	A			C12N-015/52	
CN 1252442	A			C12N-009/24	
JP 2000228980	A		55	C12N-009/24	
BR 9904104	A			C12N-009/10	
KR 2000023095	A			C12N-009/02	

Abstract (Basic): EP 990704 A2

NOVELTY - An enzyme (I) that produces non-reducing sugars (II), having a trehalose structure as an end unit, from a reducing partial starch hydrolyzate (A), and has an optimum temperature in the medium range, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) (I) obtained from Arthrobacter sp. S34, (FERM BP-6450), or a mutant of it;

(2) a non-reducing saccharide forming enzyme with at least 57% homology to a 756 residue amino acid sequence, fully defined in the specification;

(3) DNA (III) that encodes (I);

(4) producing (I) by culturing an appropriate microorganism;

(5) trehalose-releasing enzyme (IV) that hydrolyzes (II) specifically and has optimum temperature in the medium range;

(6) DNA (V) that encodes (IV);

(7) a trehalose-releasing enzyme obtained from Arthrobacter sp. S34, (FERM BP-6450), or a mutant of it;

(8) a trehalose -releasing enzyme having at least 60% homology to a 575 residue amino acid sequence, fully defined in the specification;

(9) producing (V) by culturing an appropriate microorganism;

(10) Arthrobacter sp. S34 (FERM BP-6450) and its mutants; and

(11) production of sugars by treating (A) with (I) and/or (IV).

USE - (I) is used to produce (II), particularly for further enzymatic conversion to trehalose, from starch hydrolyzate. (II) are useful as sweeteners, e.g. in foods, pharmaceuticals and cosmetics.

ADVANTAGE - Non-reducing sugars are compatible with amino acids and proteins, they do not cause browning, and have good moisture-retaining properties. (I) produces (II) in high yield and has optimum temperature about 50degreesC. Production of (II) eliminates the need to convert (A) to sugar alcohols (non-reducing) by catalytic hydrogenation .

pp; 93 DwgNo 0/13

Derwent Class: A96; B04; D13; D16; D21

International Patent Class (Main): C12N-009/02; C12N-009/10; C12N-009/24;

C12N-015/52; C12N-015/54  
International Patent Class (Additional): C07H-003/04; C12N-001/20;  
C12N-001/21; C12N-015/09; C12N-015/56; C12N-015/63; C12N-015/74;  
C12P-019/04; C12P-019/12; C12P-019/14; C12P-019/18; C12P-019/24;  
C12R-001/06; C12R-001-06; C12N-009/24; C12R-001-19

36/7/16 (Item 8 from file: 351)  
DIALOG(R) File 351:Derwent WPI  
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012999043 \*\*Image available\*\*

WPI Acc No: 2000-170895/200015

New N-acylated pseudopeptides with immunomodulating activity useful for  
treating e.g. cancer or as vaccine potentiator

Patent Assignee: OM-PHARMA (OMPH-N)

Inventor: BAUER J; MARTIN O R

Number of Countries: 087 Number of Patents: 009

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200000462	A1	20000106	WO 99IB1170	A	19990623	200015 B
AU 9942848	A	20000117	AU 9942848	A	19990623	200026
EP 1091928	A1	20010418	EP 99957636	A	19990623	200123
			WO 99IB1170	A	19990623	
CZ 200004893	A3	20010516	WO 99IB1170	A	19990623	200132
			CZ 20004893	A	19990623	
SK 200001887	A3	20010710	WO 99IB1170	A	19990623	200157
			SK 20001887	A	19990623	
BR 9911329	A	20011016	BR 9911329	A	19990623	200170
			WO 99IB1170	A	19990623	
CN 1306504	A	20010801	CN 99807761	A	19990623	200172
HU 200102475	A2	20011128	WO 99IB1170	A	19990623	200209
			HU 20012475	A	19990623	
KR 2001083078	A	20010831	KR 2000715066	A	20001229	200215

Priority Applications (No Type Date): WO 98FR1396 A 19980630

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200000462 A1 F 122 C07C-237/00

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN  
CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ  
LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK  
SL TJ TM TR TT UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR  
IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW

AU 9942848 A C07C-237/00 Based on patent WO 200000462

EP 1091928 A1 F C07C-237/00 Based on patent WO 200000462

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI  
LT LU LV MC NL PT RO SE SI

CZ 200004893 A3 C07C-237/00 Based on patent WO 200000462

SK 200001887 A3 C07C-237/00 Based on patent WO 200000462

BR 9911329 A C07C-237/00 Based on patent WO 200000462

CN 1306504 A C07C-237/00

HU 200102475 A2 C07C-237/22 Based on patent WO 200000462

KR 2001083078 A C07C-237/06

Abstract (Basic): WO 200000462 A1

NOVELTY - N-Acylated pseudopeptides (I) are new.

DETAILED DESCRIPTION - N-Acylated pseudopeptides of formula (I) in acid form or salified by a mineral or organic base are new.

R1, R2=2-24C (un)saturated carboxylic acyl (optionally substituted by at least one OH, alkyl, alkoxy, acyloxy, amino, acylamino, acylthio or 1-24C alkylthio);

m, p, q=1-10;

n=0-10;

X, Y'=H or an acid group selected from carboxy 1-5C alkyl, -CH-((CH2)m'-COOH)((CH2)n'COOH, phosphono-1-5C alkyl, dihydroxyphosphoryloxy 1-5C alkyl, dimethoxyphosphoryl, phosphono, hydroxy sulfonyl, hydroxysulfonyl 1-5C alkyl or hydroxysulfonyloxy 1-5C alkyl (all in neutral or charged form);

m', n'=0-5;

A, B'=O, S or -NH-; and

provided that at least one of X and Y' is a neutral or charged acid group as defined.

An INDEPENDENT CLAIM is also included for the preparation of (I).

ACTIVITY - Immunomodulator; cytostatic. Mouse bone marrow cells were extracted and cultured in the presence or absence of OM-294- DP , OM-294-MP, described below, or lipopolysaccharide (LPS). A graph of optical density at 490-690 Angstrom against the concentration (in mum) of active material indicates that cell proliferation with the new compounds was nearly as great as for LPS, with the mono hydrogen phosphate OM-294-MP being less active than the dihydrogen phosphate OM-294- DP .

MECHANISM OF ACTION - Vaccine potentiator.

USE - (I) are useful against disorders due to immune defense system deficiencies, or to an exaggeration in immune response. They are also useful in the treatment of cancers and as vaccine potentiators.

ADVANTAGE - Their amphiphilic nature aids formulation and transport to the membrane sites and through the cellular cytoplasm walls.

pp; 122 DwgNo 0/47

Derwent Class: B05

International Patent Class (Main): C07C-237/00; C07C-237/06; C07C-237/22

International Patent Class (Additional): A61K-031/195; A61K-031/66;

A61P-037/02; C07C-235/68; C07F-009/09

36/7/17 (Item 9 from file: 351)

DIALOG(R)File 351:Derwent WPI

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012662866

WPI Acc No: 1999-468971/199939

Reducing mixture of malto - oligosaccharide species to dextrose equivalent value of almost zero

Patent Assignee: GRAIN PROCESSING CORP (GRAI )

Inventor: ANTRIM R L ; BARRESI F W

Number of Countries: 085 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9936442	A1	19990722	WO 99US1098	A	19990119	199939 B
AU 9923268	A	19990802	AU 9923268	A	19990119	199954
BR 9907096	A	20001024	BR 997096	A	19990119	200058
			WO 99US1098	A	19990119	
EP 1049720	A1	20001108	EP 99903186	A	19990119	200062

			WO 99US1098	A	19990119	
KR 2001040358	A	20010515	KR 2000707899	A	20000719	200167
JP 2002509163	W	20020326	WO 99US1098	A	19990119	200236
			JP 2000540157	A	19990119	

Priority Applications (No Type Date): US 9871905 P 19980120

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9936442	A1	E	59	C08B-030/18	
Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW					
AU 9923268	A				Based on patent WO 9936442
BR 9907096	A			C08B-030/18	Based on patent WO 9936442
EP 1049720	A1	E		C08B-030/18	Based on patent WO 9936442
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
KR 2001040358	A			C08B-030/18	
JP 2002509163	W		44	C08B-030/18	Based on patent WO 9936442

Abstract (Basic): WO 9936442 A1

NOVELTY - Reducing a mixture of maltooligosaccharide or oligosaccharide species to a dextrose equivalent value (DE) of almost zero comprises catalytically hydrogenating the mixture under hydrogenation conditions which preserve the degree of polymerization ( DP ) profile of the mixture. The species differ at least in DP value, thus defining a DP profile for the mixture.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a product produced as above.

USE - The reduced malto - oligosaccharide is useful for forming a combination with a biological sample such as a cell, tissue, protein or DNA in aqueous solution, which is then lyophilized. The reduced malto - oligosaccharides are used as film forming agents, carrying agents for dry products or capsules, fillers for products such as creams and lotions, binders for roller compaction and granulation applications, medical and nutritional agents, soaps and cleansers, spray drying agents, tableting agents, crystallization inhibitors, sweetness controllers and cryoprotectants.

ADVANTAGE - The DE is reduced to zero without changing the DP . The product has improved resistance to color formation and improved thermal stability. A liquid mixture of reduced malto - oligosaccharides is more stable than a liquid mixture of unreduced malto - oligosaccharides . The product has low reactivity towards nitrogen containing species.

pp; 59 DwgNo 0/0

Derwent Class: A11; A96; B04; D13; D16; D17; D22; D25

International Patent Class (Main): C08B-030/18

36/7/18 (Item 10 from file: 351)  
 DIALOG(R)File 351:Derwent WPI  
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012564643 \*\*Image available\*\*



WPI Acc No: 1999-370749/199931

Poly(vinylamine) is prepared using a scavenger to remove residual  
N-vinylamide

Patent Assignee: AMCOL INT CORP (AMCO-N)

Inventor: ANDERSON M; BEIHOFFER T W; DARLINGTON J W; LOBO L I; MITCHELL M A  
; TRZUPEK L L; LOBO L L

Number of Countries: 085 Number of Patents: 013

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9925745	A1	19990527	WO 98US24007	A	19981111	199931 B
ZA 9810466	A	19990728	ZA 9810466	A	19981116	199935
AU 9913964	A	19990607	AU 9913964	A	19981111	199943
US 5981689	A	19991109	US 97974119	A	19971119	199954
NO 200002547	A	20000613	WO 98US24007	A	19981111	200045
			NO 20002547	A	20000518	
EP 1034194	A1	20000913	EP 98957789	A	19981111	200046
			WO 98US24007	A	19981111	
FI 200001106	A	20000629	WO 98US24007	A	19981111	200047
			FI 20001106	A	20000510	
US 6121409	A	20000919	US 97974119	A	19971119	200048
			US 99290834	A	19990413	
BR 9814680	A	20001003	BR 9814680	A	19981111	200053
			WO 98US24007	A	19981111	
US 6194631	B1	20010227	US 97974119	A	19971119	200114
			US 98179554	A	19981028	
CN 1286702	A	20010307	CN 98813192	A	19981111	200140
KR 2001032287	A	20010416	KR 2000705495	A	20000519	200163
JP 2001523737	W	20011127	WO 98US24007	A	19981111	200204
			JP 2000521124	A	19981111	

Priority Applications (No Type Date): US 98179554 A 19981028; US 97974119 A  
19971119; US 99290834 A 19990413

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 9925745	A1	E	69	C08F-008/12	
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Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU  
CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK  
LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ  
TM TR TT UA UG UZ VN YU ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR  
IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW

ZA 9810466	A		68	C08F-000/00	
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AU 9913964	A				Based on patent WO 9925745
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US 5981689	A			C08F-008/00	
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NO 200002547	A			C08F-020/52	
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EP 1034194	A1	E		C08F-008/12	Based on patent WO 9925745
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Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT  
LI LT LU LV MC MK NL PT RO SE SI

FI 200001106	A			C08F-000/00	
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US 6121409	A			C08F-008/12	Div ex application US 97974119
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Div ex patent US 5981689

BR 9814680	A			C08F-008/12	Based on patent WO 9925745
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US 6194631	B1			A61F-013/15	CIP of application US 97974119
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CIP of patent US 5981689

CN 1286702	A			C08F-008/12	
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KR 2001032287	A			C08F-008/12	
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JP 2001523737	W		55	C08F-008/12	Based on patent WO 9925745
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Abstract (Basic): WO 9925745 A1

NOVELTY - A method of manufacturing poly(vinylamine) (I).

DETAILED DESCRIPTION - A method of manufacturing poly(vinylamine)

(I) comprises:

(A) forming a monomer mixture of (A1) N-vinylamide, (A2) 0-90 wt.% of a monoethylenically unsaturated monomer (with respect to the total monomer) and (A3) 0-10 wt.% of a polyvinyl monomer,

(B) polymerising the monomer mixture to form a poly(N-vinylamide) mixture

(C) adding 0.1-3.0 wt.% (wrt N-vinylamide) of a scavenging agent

(D) allowing the scavenging agent to react to remove residual N-vinylamide and impurities from the poly(N-vinylamide) mixture.

(E) adding an acid or a base to form a hydrolysis mixture to hydrolyze the poly(N-vinylamide) to form poly(vinylamine) (I).

INDEPENDENT CLAIMS are included for:

(i) a method of absorbing an aqueous medium by contact with a lightly crosslinked poly(vinylamine) salt,

(ii) a superabsorbent material (II) comprising a lightly crosslinked poly(vinylamine) and an acidic water-absorbing resin; and

(iii) an article comprising the superabsorbent material (III).

USE - The poly(vinylamine) (I) is useful for the production of superabsorbent gels for use in sanitary goods, hygienic goods, wiping cloths, disposable towels and bath mats.

ADVANTAGE - Superabsorbent materials (II) containing (I) have improved absorption of electrolyte containing solutions such as blood, urine, saline and menses.

DESCRIPTION OF DRAWING(S) - The figure shows the acquisition time under 0.7 psi load (50% superabsorbent polymer loading) Vs number of insults.

comparative core (A-1)

cores of the present invention (not disclosed) (B,C)

pp; 69 DwgNo 1/4

Derwent Class: A14; A18; A21; A96; D15; D22; E19; F07; P32; P34

International Patent Class (Main): A61F-013/15; C08F-000/00; C08F-008/00; C08F-008/12; C08F-020/52

International Patent Class (Additional): A61L-015/00; C08G-069/00; C08J-003/00; C08J-005/20; C08L-003/00

36/7/19 (Item 11 from file: 351)

DIALOG(R)File 351:Derwent WPI

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011685699

WPI Acc No: 1998-102609/199810

Production of arabinitol from glucose and/or fructose and/or galactose or lactose hydrolysates or inverted sugar - by oxidative decarboxylation of hexose, crystallisation of obtained aldonate alkali metal salt, protonation of salt to corresponding free acid, optional crystallisation of aldonolactone and hydrogenation of aldonic acid

Patent Assignee: CERESTAR HOLDING BV (CERE-N)

Inventor: COOMANS S M J; ELSEVIERS M; LEMMENS H O J; ROEPER H W W; RIPER H D W W; ROEPER W; WILHELM H D; COOMANS S M

Number of Countries: 024 Number of Patents: 011

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
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EP 820979	A1	19980128	EP 97305135	A	19970711	199810	B
NO 9703419	A	19980126	NO 973419	A	19970724	199814	
JP 10087532	A	19980407	JP 97198660	A	19970724	199824	
CA 2210409	A	19980125	CA 2210409	A	19970714	199828	
US 5831078	A	19981103	US 97898928	A	19970723	199851	
MX 9705671	A1	19980201	MX 975671	A	19970724	199954	
NO 307780	B1	20000529	NO 973419	A	19970724	200033	
EP 820979	B1	20010912	EP 97305135	A	19970711	200155	
DE 69706618	E	20011018	DE 606618	A	19970711	200169	
			EP 97305135	A	19970711		
CN 1179411	A	19980422	CN 97115349	A	19970725	200222	
MX 201745	B	20010504	MX 975671	A	19970724	200227	

Priority Applications (No Type Date): GB 9615635 A 19960725

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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EP 820979	A1	E	17	C07C-051/235	
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Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LI LU  
MC NL PT SE

NO 9703419	A		C07C-029/16
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JP 10087532	A	10	C07C-031/18
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CA 2210409	A		C07C-031/18
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US 5831078	A		C07H-001/00
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MX 9705671	A1		C07H-001/00
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NO 307780	B1		C07C-029/16	Previous Publ. patent NO 9703419
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EP 820979	B1	E	C07C-051/235
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Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LI NL  
PT SE

DE 69706618	E		C07C-051/235	Based on patent EP 820979
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CN 1179411	A		C07C-031/18
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MX 201745	B		C07H-001/00
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Abstract (Basic): EP 820979 A

Production of arabinitol from glucose (anhydrous, monohydrate, high dextrose syrups ( starch hydrolysates)) and/or fructose, and/or galactose, or lactose hydrolysates, or invert sugar, comprises: (a) oxidative decarboxylation of a hexose, to yield predominantly 5C-aldonate alkali metal salts, especially D-arabinonate and/or D-lyxonate; (b) crystallisation of the obtained aldonate alkali metal salt; (c) protonation of the alkali metal salt to the corresponding free acid; (d) optional crystallisation of the intermediate aldonolactone; and (e) hydrogenation of the aldonic acid to arabinitol.

ADVANTAGE - The process has low processing costs, easy handling and easy working up of the reaction due to: (i) oxidative decarboxylation applying only low pressures of oxygen without addition of anthraquinone derivative or organic solvents; crystallisation from water without addition of organic solvents; (ii) protonation applying ion exchange resin to free product of all traces of foreign ions and hydrogenation in presence of ruthenium based catalysts to give good selectivity.

Dwg.0/6

Derwent Class: D17; E17

International Patent Class (Main): C07C-029/16; C07C-031/18; C07C-051/235; C07H-001/00

International Patent Class (Additional): C07C-027/04; C07C-029/149; C07C-029/151; C07C-029/48; C07C-029/50; C07C-029/78; C07C-031/26; C07C-059/105

36/7/20 (Item 12 from file: 351)  
DIALOG(R)File 351:Derwent WPI  
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~~011637926~~ ~~\*\*Image available\*\*~~

WPI Acc No: 1998-054834/199806

Manufacturing crystalline maltitol and crystalline solid containing maltitol - by catalytically hydrogenating maltose containing syrup to give sugar alcohol syrup and chromatographically separating with cation exchange resin

Patent Assignee: TOWA CHEM IND CO LTD (TOAG ); TOWA KASEI KOGYO KK (TOAG )

Inventor: MAGARA M; OKAMOTO N; TATENO Y; YONEDA S

Number of Countries: 021 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 816373	A1	19980107	EP 97110882	A	19970702	199806 B
AU 9728349	A	19980115	AU 9728349	A	19970627	199809
JP 10017589	A	19980120	JP 96194099	A	19960705	199813
US 5932015	A	19990803	US 97888138	A	19970703	199937
AU 715823	B	20000210	AU 9728349	A	19970627	200018
EP 816373	B1	20011121	EP 97110882	A	19970702	200176
DE 69708395	E	20020103	DE 608395	A	19970702	200210
			EP 97110882	A	19970702	

Priority Applications (No Type Date): JP 96194099 A 19960705

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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EP 816373	A1	E	21	C07H-015/04	
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Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LI LU  
MC NL PT SE

AU 9728349	A			C07H-015/04	
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JP 10017589	A		14	C07H-015/04	
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US 5932015	A			C13D-003/14	
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AU 715823	B			C07H-015/04	Previous Publ. patent AU 9728349
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EP 816373	B1	E		C07H-015/04	
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Designated States (Regional): DE FR GB IT NL

DE 69708395	E			C07H-015/04	Based on patent EP 816373
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Abstract (Basic): EP 816373 A

Manufacturing crystalline maltitol and crystalline mixture solid containing maltitol comprises: (a) hydrogenating syrup with a maltose content of 40-75 wt.% in the solid component in the presence of a catalyst to obtain corresponding syrup of sugar alcohol; (b) chromatographically separating the sugar alcohol syrup by supplying to a column packed with a cation exchange resin to obtain: (b-i) high sorbitol content fraction, (b-ii) maltitol syrup fraction with a maltitol content of 80.5-86.5 wt.% in the solid component, and (b-iii) polyol fraction having a degree of polymerisation ( DP ) of at least 3; (c) chromatographically separating the maltitol syrup fraction by supplying to a column packed with a cation exchange resin to obtain: (c-i) high sorbitol content fraction, (c-ii) second maltitol syrup fraction with a maltitol content of at least 97.5 wt.% in the solid component, and (c-iii) polyol fraction whose degree of polymerisation ( DP ) is at least 3; (d) crystallising after a concentration of syrup fraction (c-ii) and separating the maltitol from

mother liquor with a maltitol content of at least 90 wt.% in the solid component and optionally (e) spray-drying or kneading the mother liquor under cooling in the presence of a seed crystal to obtain a crystalline mixture solid containing crystalline maltitol.

Catalytic hydrogenation is preferably effected in a continuous process by using a Raney nickel catalyst prepared by quenching molten nickel and aluminium and subjecting, in as manufactured form or after milling, to classification and activation, or a Raney catalyst prepared by forming a powder into pellets.

USE - The sorbitol and oligosaccharide fraction by-products may be used in commercially hydrogenated starch hydrolysate in food products, pharmaceuticals and cosmetics.

ADVANTAGE - The process is economical and produces high value added crystalline maltitol and crystalline mixture solid containing crystalline maltitol from cheap raw materials. The maltitol has a sweet taste and degree of sweetness similar to those of sucrose and does not cause tooth decay.

Dwg.2/3

Derwent Class: B07; D13; D17; D21; E13

International Patent Class (Main): C07H-015/04; C13D-003/14

International Patent Class (Additional): B01D-015/08; C07H-001/00;  
C13K-007/00

36/7/21 (Item 13 from file: 351)  
DIALOG(R)File 351:Derwent WPI  
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010864467

WPI Acc No: 1996-361418/199636

Reduced calorie frozen desserts - contg. lactitol and second bulk sweetener as well as fat, milk solids, intense sweetener and water

Patent Assignee: XYROFIN OY (XYRO-N)

Inventor: OLINGER P M; PEPPER T

Number of Countries: 071 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5527554	A	19960618	US 95458934	A	19950602	199636 B
WO 9638050	A1	19961205	WO 96FI322	A	19960531	199703
AU 9658231	A	19961218	AU 9658231	A	19960531	199714
NO 9705456	A	19971217	WO 96FI322	A	19960531	199812
			NO 975456	A	19971127	
EP 828435	A1	19980318	EP 96919842	A	19960531	199815
			WO 96FI322	A	19960531	
JP 11505727	W	19990525	JP 96536231	A	19960531	199931
			WO 96FI322	A	19960531	
KR 99022208	A	19990325	WO 96FI322	A	19960531	200023
			KR 97708687	A	19971202	

Priority Applications (No Type Date): US 95458934 A 19950602

Cited Patents: 1.Jnl.Ref; WO 9216542

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5527554	A		8	A23G-009/02	
KR 99022208	A			A23G-009/02	Based on patent WO 9638050
WO 9638050	A1 E	21		A23G-009/02	

Designated States (National): AL AM AT AU AZ BB BG BR BY CA CH CN CZ DE  
DK EE ES FI GB GE HU IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK MN

MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG US UZ VN  
 Designated States (Regional): AT BE CH DE DK EA ES FI FR GB GR IE IT KE  
 LS LU MC MW NL OA PT SD SE SZ UG  
 AU 9658231 A A23G-009/02 Based on patent WO 9638050  
 EP 828435 A1 E A23G-009/02 Based on patent WO 9638050  
 Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LI LU  
 MC NL PT SE  
 JP 11505727 W 19 A23G-009/02 Based on patent WO 9638050  
 NO 9705456 A A23G-009/02

Abstract (Basic): US 5527554 A

Reduced calorie frozen desserts contain 0-12% fat, 5-15% lactitol, 5-15% of a second bulk sweetener, 7-17% milk solids, 0.01-0.5% intense sweetener (II), and water.

The second bulk sweetener is mannitol, sorbitol, xylitol, isomalt, maltitol, polydextrose, maltodextrin, low dextrose equivalent (DE) corn syrup solids or, esp., hydrogenated starch hydrolysate (I). (I) is prepd. by catalytic hydrogenation of a corn or 20-80 DE syrup, esp. wheat syrup. (II) is aspartame, acesulfame K, saccharin, sucralose, alitame and/or cyclamate. Prods. also contain 0.1-1% stabiliser. Their total solids content is 30-40%. Desserts are 4-8.0% milk fat, 9-11% lactitol, 9-12% hydrogenated starch hydrolysate (wet basis), 11-13% milk solids, 0.3-0.7% stabiliser, 0.02-0.04% aspartame, and water.

ADVANTAGE - Desserts have taste and texture as good as those sweetened with sucrose and corn syrup solids. It also has better hardness, melting and overrun properties.

Dwg.0/3

Derwent Class: D13

International Patent Class (Main): A23G-009/02

36/7/22 (Item 14 from file: 351)  
 DIALOG(R)File 351:Derwent WPI  
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010118029 \*\*Image available\*\*  
 WPI Acc No: 1995-019280/199503

Powder for solid formulation of liquid cpds. - consists of reduced starch hydrolysate dried from powder is obtd.

Patent Assignee: NICHIDEN KAGAKU KK (NICH-N)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 6306102	A	19941101	JP 93147113	A	19930423	199503 B

Priority Applications (No Type Date): JP 93147113 A 19930423

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
JP 6306102	A	3	C08B-031/00	

Abstract (Basic): JP 6306102 A

A powder material for solid formulation of liquid cpds is claimed. The hydrolysate powder aq. soln. using a drum layer.

The starting material is hydrolysed natural or semi-synthetic starch obtd. by chemical (acidic or alkaline) or enzymatic hydrolysis. It is reduced pref. by hydrogenation using Raney Ni as a catalyst

: The average polymerization degree of the reduced starch hydrolysate is pref. 3-8 and at least 20%, pref. 50-100% of its reducible terminal gps. are reduced. The powder material is obtd. by drying 30-60 wt% aqueous soln. of the reduced starch hydrolysate with a drum dryer.

USE/ADVANTAGE - The material is useful to form a powder contg. absorbed liquid cpds. It absorbs oils and organic solvents and it shows less darkening when contacted to alkaline substances.

it is useful for foodstuffs, pharmaceuticals and agrochemicals.

Dwg.0/0

Derwent Class: A11; A96; B07; C07

International Patent Class (Main): C08B-031/00

International Patent Class (Additional): A61K-009/14; A61K-047/36

36/7/23 (Item 15 from file: 351)

DIALOG(R) File 351:Derwent WPI

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009742204

WPI Acc No: 1994-022055/199403

Catalyst for heavy oil hydrogenation - has metal, pref. Gp.-VIA, loaded on refractory oxide support in presence of water

Patent Assignee: IDEMITSU KOSAN CO LTD (IDEK )

Number of Countries: 001 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 5329376	A	19931214	JP 92163375	A	19920601	199403 B
JP 2806701	B2	19980930	JP 92163375	A	19920601	199844

Priority Applications (No Type Date): JP 92163375 A 19920601

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 5329376	A		7	B01J-031/02	
JP 2806701	B2		6	B01J-023/755	Previous Publ. patent JP 5329376

Abstract (Basic): JP 5329376 A

In the catalyst, catalyst metal (pref. Gp. VIA and/or Gp.VIII metal) is loaded on a refractory oxide support in the presence of a water soluble organic cpd. which contains OH and/or ether gps., pref. the water soluble organic cpd. is polyethyleneglycol, MeOH, EtOH, propanol, butanol, ethylene glycol, diethylene glycol, glycerin, polyoxyethylene-nonyl-phenyl ether, PVA, saccharose or starch. A method of hydrogenation is also claimed, where heavy oil is treated with the catalyst claimed.

USE/ADVANTAGE - Used for hydrogenation of oil distn. residue, oil sand or heavy oil. The amt. of by-prod. sludge or coke can be minimised. A higher yield of middle cut can be obtd..

In an example, alumina supports were impregnated with a mixt. contg. ammonium molybdate, nickel nitrate, polyethyleneglycol, malic acid, and water. They were treated at 448 deg.C under a H2 pressure of 85 kg/cm2 G in an autoclave for 1 hr.

Dwg.0/0

Derwent Class: A97; H04

International Patent Class (Main): B01J-023/755; B01J-031/02

International Patent Class (Additional): B01J-023/28; B01J-023/85; B01J-023/88; B01J-037/02; C07B-061/00; C10G-047/12

36/7/24 (Item 16 from file: 351)  
DIALOG(R)File 351:Derwent WPI  
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008703534

WPI Acc No: 1991-207554/199128

Homogeneous hydrocracking of carbohydrate(s) under mild conditions - to give glycerol, glycol and other polyol cpds. by contacting with hydrogen in soln. contg. soluble Gp-VIII metal catalyst

Patent Assignee: US DEPT ENERGY (USAT )

Inventor: ANDREWS M A; KLAEREN S A

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5026927	A	19910625	US 89437403	A	19891116	199128 B

Priority Applications (No Type Date): US 89437403 A 19891116

Abstract (Basic): US 5026927 A

Hydrocracking of a mono- or di-saccharide or a pretreated polysaccharide substrate or mits. of these is effected by bringing the substrate into contact with H<sub>2</sub> in a soln. contg. a soluble Gp. VIII metal hydrogenation catalyst selected from H<sub>2</sub>Ru(PPh<sub>3</sub>)<sub>4</sub>, H<sub>2</sub>Ru(CO)(PPh<sub>3</sub>), H<sub>3</sub>Ru(PPh<sub>3</sub>)<sub>3</sub>(-)<sub>1</sub>, H<sub>3</sub>Ir(PPh<sub>3</sub>)<sub>3</sub>, HMX(CO)(PPh<sub>3</sub>)<sub>n</sub> where M = Ru or Os, X = Cl, Br or CH<sub>3</sub>CO<sub>2</sub> and n = 2 or 3, HRh(PPh<sub>3</sub>)<sub>4</sub> and H<sub>2</sub>Rh(PPhMe<sub>2</sub>)<sub>2</sub> (solvent)<sub>2+1</sub>.

Prodn. of lower polyhydric alcohols comprises contacting a monosaccharide substrate with H<sub>2</sub> in the presence of a soluble transition metal catalyst selected from the gp. above together with RhCl(PPh<sub>3</sub>)<sub>3</sub> and RuCl<sub>2</sub>(PPh<sub>3</sub>)<sub>3</sub> and a strong base at 75-125 deg C and 100-500 psi in an amide solvent for 1-12h in the absence of O<sub>2</sub>.

The soln. pref. also contains a strong base selected from alkaline earth and alkali metal hydroxides, alkoxides and basic salts and alkaline earth metal oxides present at 0.01-25 mole% of the substrate. The Gp. VIII metal hydrogenation catalyst is present at 0.001-10 mole% of substrate. The catalyst for monosaccharide cracking is pref. H<sub>2</sub>Ru(PPh<sub>3</sub>)<sub>4</sub> or H<sub>2</sub>Ru(CO)(PPh<sub>3</sub>)<sub>3</sub>.

USE/ADVANTAGE - The process cracks carbohydrates to give commercially important glycols. The process is homogeneous and requires milder conditions than has previously been possible. Better selectivity is obtd. thereby reducing costs in both substrate conversion and prod. purificn.. (4pp Dwg.No.0/0

Derwent Class: E17; J04

International Patent Class (Additional): C07C-029/14; C07C-031/20

36/7/25 (Item 17 from file: 351)  
DIALOG(R)File 351:Derwent WPI  
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007984961

WPI Acc No: 1989-250073/198935

Converting polysaccharide (s) to polyhydric alcohol(s) - by hydrogenation in presence of catalyst comprising supported metal e.g. ruthenium and acidic solid



Patent Assignee: FINA RES SA (LABO ); SYNFINA-OLEOFINA SA (SYNF-N)

Inventor: HINNEKENS H; JACOBS P

Number of Countries: 016 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 329923	A	19890830	EP 88870023	A	19880222	198935 B
<del>DK 8900784</del>	<del>A</del>	<del>19890823</del>				<del>198943</del>
JP 1268653	A	19891026	JP 8939495	A	19890221	198949
US 4950812	A	19900821	US 89313946	A	19890222	199036
EP 329923	B1	19930421	EP 88870023	A	19880222	199316
DE 3880477	G	19930527	DE 3880477	A	19880222	199322
			EP 88870023	A	19880222	
ES 2054877	T3	19940816	EP 88870023	A	19880222	199434

Priority Applications (No Type Date): EP 88870023 A 19880222

Cited Patents: 1.Jnl.Ref; US 2609399

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
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EP 329923	A	E 10		
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Designated States (Regional): AT BE CH DE ES FR GB GR IT LI LU NL SE

EP 329923	B1	E 11	C07C-031/26	
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Designated States (Regional): AT BE CH DE ES FR GB GR IT LI LU NL SE

DE 3880477	G		C07C-031/26	Based on patent EP 329923
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ES 2054877	T3		C07C-031/26	Based on patent EP 329923
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Abstract (Basic): EP 329923 A

Polysaccharides are converted to polyhydric alcohols by hydrogenation at high pressure and temp. in the presence of a catalyst consisting of : i) a supported metal, (being either ruthenium, copper, nickel or cobalt) dispersed on the support as to adsorb more than 0.58 molecules CO per metal atom and ii) a solid with sufficient acid functions so that the rate constant of hydrolysis of sucrose, k1, on the catalyst is greater than 70% of the rate constant of hydrogenation of glucose, k2, on the catalyst .

The supported metal is prepared by ion exchange or the decomposition of an ammine complex salt. The support may be identical to the solid, such as a synthetic acidic zeolite. The reaction temp. ranges from 348 to 523 K.

ADVANTAGE - This is a single step process combining hydrolysis and hydrogenation and results in high purity hexitols.

Dwg.0/0

Abstract (Equivalent): EP 329923 B

Single-step process for the production of polyhydric alcohol from a polysaccharide by contacting said polysaccharide in an aqueous medium with hydrogen at elevated temperature and pressure in the presence of a catalyst consisting of (i) a supported metal selected from ruthenium, copper, nickel, cobalt and their mixtures and (ii) a solid having acidic functions, which solid may or may not be identical to the support, characterised in that (a) the metal is highly dispersed by ion exchange on the support so as to be capable of adsorbing more than 0.58 molecules of CO per atom of metal and (b) the solid has sufficient acid functions so that the rate constant of hydrolysis of sucrose on the catalyst is greater than 70% of the rate constant of hydrogenation of glucose on the catalyst . (Dwg.0/0)

Abstract (Equivalent): US 4950812 A

Prod. of polyols comprises catalytic hydrogenation of corresp. polysaccharides in an aq. medium, in the presence of Ru, Cu, Ni

and/or Co catalysts on a support material (e.g. refractory oxides, acidic zeolites, active carbon, silica gel, etc.) and also a solid with acidic properties, pref. an acidic zeolite (e.g. zeolite Y), at temps. 348-523 K and pressure above about 1 MPa, for 30-180 min.

The catalyst may be supported on the acidic zeolite; and the zeolite should have an acidity such that rate constant for hydrolysis of sucrose in the presence of the zeolite more than 70% of the rate constant for hydrogenation of glucose. The activity of the dispersed metal catalyst corresponds to an adsorption of more than 0.58 mol. CO per mol. metal catalysts.

ADVANTAGE - Substantially pure polyols are isolated in a single stage process. (6pp)v

Derwent Class: E17

International Patent Class (Main): C07C-031/26

International Patent Class (Additional): B01J-029/06; C07C-029/14; C13K-013/00

36/7/26 (Item 18 from file: 351)

DIALOG(R) File 351:Derwent WPI

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007280384

WPI Acc No: 1987-277391/198739

Sorbitol prepn. from hydrolysed starch solns. - by two-stage hydrogenation over nickel, then ruthenium after acidification

Patent Assignee: PFIZER INC (PFIZ ); TOYO TIRE & RUBBER KK (TOYF )

Inventor: GAUTHIER G J; MICELI J D

Number of Countries: 016 Number of Patents: 008

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4694113	A	19870915	US 86870462	A	19860604	198739 B
EP 249364	A	19871216	EP 87304757	A	19870529	198750
JP 62294631	A	19871222	JP 87138040	A	19870601	198805
CA 1271781	A	19900717				199034
EP 249364	B	19910612				199124
DE 3770699	G	19910718				199130
ES 2022349	B	19911201				199202
JP 92027220	B	19920511	JP 87138040	A	19870601	199223

Priority Applications (No Type Date): US 86870462 A 19860604

Cited Patents: A3...8902; CH 394142; EP 7100; FR 1231029; GB 2097390;

No-SR.Pub

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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US 4694113	A		6		
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EP 249364	A	E			
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Designated States (Regional): AT BE CH DE ES FR GB GR IT LI LU NL SE

EP 249364	B				
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Designated States (Regional): AT BE CH DE ES FR GB GR IT LI LU NL SE

JP 92027220	B		8	C07C-031/26	Based on patent JP 62294631
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Abstract (Basic): US 4694113 A

Sorbitol (I) is prep'd. from a 50-98.5 DE hydrolysed starch (II) soln. by (a) and (II)-soln. is hydrogenated over an Ni catalyst at 120-160 deg. C/pH 3-7/35-140 bar until the reducing sugar content is eblow 5%; (b) Ni catalyst is removed, and the pH is adjusted to 1-2.5;

and (c) the acidified soln. is hydrogenated over an Ru catalyst at 100-180 deg. C/35-140 bar until H<sub>2</sub> uptake is complete, then the Ru is removed.

ADVANTAGE - The 2-stage hydrogenation process allows expensive Ru catalyst to be recovered and recycled, and a more complete conversion of glucose and its oligomers is obtd. In addn., the process can be used with incompletely hydrolysed starch solns.

Abstract (Equivalent): EP 249364 B

A process for production of sorbitol from a 50 to 98.5 DE ( Dextrose Equivalent ) hydrolysed starch solution which comprises the steps of (a) hydrogenation of said hydrolysed starch solution in the presence of a catalytic amount of nickel at a pH in the range of 3.0 to 7.0, at 120 to 160 deg. C, and a pressure of from 500 to 2000 psig (35 to 140 bars), until the reducing sugar content of the mixture is below 5 percent; (b) removal of nickel catalyst and acidification of the resulting solution to a pH in the range of 1.0 to 2.5; (c) hydrogenation of the acidified solution in the presence of a catalytic amount of ruthenium at 100 to 180 deg. C, and a pressure of from 500 to 2000 psig (35 to 140 bars) until hydrogen uptake is substantially complete, and removal of said ruthenium. (14pp)

Derwent Class: D17; E17

International Patent Class (Main): C07C-031/26

International Patent Class (Additional): B01J-023/46; B01J-025/02; C07B-061/00; C07C-029/13; C07C-029/132

36/7/27 (Item 19 from file: 351)

DIALOG(R)File 351:Derwent WPI

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007268254

WPI Acc No: 1987-265261/198738

New crosslinked xonotlite crystal fibre prepn. - by pressure -filtering sec. xonotlite particles for use in strengthening flat paper or plastic articles

Patent Assignee: GIULINI CHEM GMBH (GIUL )

Inventor: KRETSCHMER M; POTENCSIK I; URMANN E

Number of Countries: 013 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 237827	A	19870923	EP 87102418	A	19870220	198738 B
DE 3609355	A	19870924	DE 3609355	A	19860320	198739
JP 62241817	A	19871022	JP 8764446	A	19870320	198748
DE 3609355	C	19890323				198912

Priority Applications (No Type Date): DE 3609355 A 19860320

Cited Patents: No-SR.Pub

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 237827	A	G	17		

Designated States (Regional): AT BE CH DE ES FR GB IT LI LU NL SE

DE 3609355	A	9
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Abstract (Basic): EP 237827 A

New xonotlite crystal fibres comprise prim. crystals which are interlocked with one another and crosslinked. The prim. crystals have length below 5 micron, width below 1 micron and specific surface,

according to BET, 30-120 sq.m/g.

USE/ADVANTAGE - The crystals are useful for reinforcing sheet- and foil-like flat-shaped articles of synthetic resin, paper, cardboard or pulp-sheet and also impart resistance to combustion. The particles act as strengtheners as well as fillers and are more suitable for increasing the strength of flat articles than hollow spherical particles.

In an example, xonotlite was prepd. in standard manner, in an autoclave, by stirring an aq. suspension of CaO and SiO<sub>2</sub>, in molar ratio 1.05:1, water:solids ratio 16:1, at 200 deg.C, for 2 hrs. The suspension obtd. contained 6 wt.% solids, After filtering by suction, the filter-cake contained 10-12 wt.% solids and was re-dispersed, with stirring, to a stable suspension of spherical sec. particles. The suspension was filtered under 3 MPa. The filter-cake contained 30 wt.% solids and was re-dispersed in water to a stable suspension of prim. crystals which crosslinked and interlocked in a plane.

0/5

Abstract (Equivalent): DE 3609355 C

A new cpd. is maltite in anhydrous crystalline form. A completely crystalline solid mixt. with a content of anhydrous crystalline maltite of at least 65% (based on dry solids) may be prepd. by gently stirring a super satd. maltite contg. soln. with a maltite content of at least 65% (based on dry solids) at 0-95 deg.C in the presence of seed crystals and recovering the total sugar as a solid crystalline mixt. The super satd.maltite soln. is obtainable by enzymatic saccharification of a starch hydrolysate with isoamylase and beta-amylase or with pullulanase and beta-amylase followed by catalytic hydrogenation of the saccharified starch.

USE/ADVANTAGE - The maltite crystals are non-hygroscopic and easily dissolved and are useful as sweetener for foods and drinks and for the prepn. of ether or ester derivs. under anhydrous conditions, the derivs. being useful as emulsifiers and surfactants. (9pp

Derwent Class: A60; E33; F09; L02

International Patent Class (Additional): C01B-033/24; C08K-007/10;

C09C-001/02; C09C-003/04; D21H-003/78; D21H-005/00

36/7/28 (Item 20 from file: 351)

DIALOG(R)File 351:Derwent WPI

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004702888

WPI Acc No: 1986-206230/198632

Prepn. of crystallised maltitol - by enzymic saccharification of milk or starch catalytic hydrogenation chromatographic fractionation of the maltose syrup etc.

Patent Assignee: ROQUETTE FRERES SA (ROQF )

Inventor: DEVOS F; GOUY P A

Number of Countries: 015 Number of Patents: 011

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
FR 2575179	A	19860627	FR 8419600	A	19841220	198632	B
EP 189704	A	19860806	EP 85402587	A	19851220	198632	
AU 8551546	A	19860626				198633	
DK 8505938	A	19860621				198638	
JP 61180797	A	19860813	JP 85285911	A	19851220	198639	
FI 8505063	A	19860621				198643	

US 4846139	A	19890711	US 88143275	A	19880106	198935
EP 189704	B	19900131				199005
DE 3575728	G	19900308				199011
JP 90011599	B	19900314				199014
CA 1266645	A	19900313				199018

Priority Applications (No. Type Date): FR 8419600 A 19841220

Cited Patents: 3.Jnl.Ref; EP 72080; FR 2000580; FR 2454830; FR 2499576; JP 57209000; JP 59162953

#### Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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FR 2575179	A		22		
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EP 189704	A	F			
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Designated States (Regional): BE CH DE FR GB IT LI NL SE

EP 189704	B	F			
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Designated States (Regional): BE CH DE FR GB IT LI NL SE

#### Abstract (Basic): FR 2575179 A

Prepn. of crystallised maltitol comprises:- (1) enzymic saccharification of a starch milk contg. 25-45% solids, the conditions (type and amt. of enzymes, temp. time of reaction, etc) being such that the maltose content of the obtd. syrup is 50-80 (60-80) wt.% w.r.t solids; (2) Catalytic hydrogenation in known fashion; (3) Chromatographic fractionation of the maltitol syrup, the parameters being such that a fraction (A) is obtd. rich on maltitol having the following compsn in wt.% w.r.t solids:- 87-97.5 (87-96) wt.% of maltitol; less than 1% (pref. less than 0.6%) of polyols of D.P at least 4, balance being sorbitol and maltotriitol; (4) Conc'n. of the fraction (A) to a solids content suitable for permitting formation of maltitol crystals; (5) Crystallisation and sepn. of maltitol crystals and (6) Recycling of the mother liquor of the crystallisation to the head of the chromatographic fractionation step, this recycling permitting an almost quantitative extraction of the maltitol formed during hydrogenation of the maltose syrup.

ADVANTAGE - The volumes to be treated are reduced. The energy required for water evaporation is markedly reduced. The liquefaction of the starch can be done at a dextrose equivalent greater than 2, compatible with an absence of retrogradation of the starch. The use of enzymes such as isoamylase or pullulanase can be avoided. The high osmotic pressures caused by the high syrup concns. used protect the latter from any microbial contamination.

#### Abstract (Equivalent): EP 189704 B

Process for preparing crystalline maltitol, characterized by the fact that it comprises successively: a catalytic hydrogenation step performed in a manner known in itself, of a maltose syrup containing at least 50%, preferably from 60 to 80% by weight on dry matter, of maltose obtained by enzymatic saccharification, with a dry matter content comprised between 25 and 45% of a starch milk liquefied by the acid or enzymatic route. a chromatographic fractionation step performed in a manner known in itself, of the maltitol syrup obtained at the preceding step, the parameters of this chromatographic fractionation step among which namely the elution rate, the rate of feeding with hydrogenated syrup, the rate of extraction of the fraction rich in maltitol, the composition of the zones of desorption, adsorption and enrichment, being selected in order to obtain a fraction (A) rich in maltitol having the following composition, the percentages being expressed by weight to dry matter: at least 87%, preferably from

87 to 97.5% and, more preferably, from 87 to 95.5% of maltitol, a proportion of polyols of degree of polymerization or DP more than 4 less than 1%, preferably less than 0.7% and, still more preferably, less than 0.6%, the complement to 100% being constituted by sorbitol and maltotritol, a step of concentration of the fraction (A) rich in maltitol to a dry matter content suitable for permitting the ~~formation of maltitol crystals, generally comprised between 75 and 92%~~ of dry matter a step of crystallization and separation of the maltitol crystals and a step recycling the crystallization mother liquors to the head of the chromatographic fractionation step, this recycling of the crystallization mother-liquors enabling an almost quantitative extraction of the maltitol formed during the hydrogenation step of the maltose syrup. (11pp)

Abstract (Equivalent): US 4846139 A

Maltitol is prepd. by (a) liquefying starch milk of dry matter content 25-45wt.% to dextrose equiv. 2-25; (b) subjecting this to an enzyme to saccharify starch to form a maltose syrup of dry matter content 25-45wt.% contg. 50-80wt.% maltose; (c) catalytically hydrogenating with ruthenium or Raney nickel catalyst to form syrup contg. 50-80wt.% maltitol, sorbitol, maltotriitol, and polyols of deg. of polymerisation 4 or more; and (d) chromatographically fractionating syrup to form maltitol-rich fractions comprising (i) 87wt.% or more maltitol, (ii) less than 1wt.% of the polyols, and (iii) sorbitol and maltotriitol to 100wt.%.

Process comprises (e) concentrating fractions to 75-92wt.% (dry matter); (f) crystallising maltitol from the conc. forming crystal sepd. from mother liquors; (g) recycling liquor to (d).

ADVANTAGE - Good yield is obtd. with richness more than 96%. (9pp)d  
Derwent Class: D17; E17

International Patent Class (Additional): C07C-027/00; C07H-001/06;  
C07H-003/04; C07H-015/04; C12P-019/22; C13K-001/08; C13K-013/00

36/7/29 (Item 21 from file: 351)  
DIALOG(R)File 351:Derwent WPI  
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004660218

WPI Acc No: 1986-163560/198626

Prodn. of maltitol - by hydrogenation of maltose syrup followed by chromatographic fractionation

Patent Assignee: ROQUETTE FRERES SA (ROQF )

Inventor: DEVOS F; GOUY P A; GOUY P

Number of Countries: 017 Number of Patents: 014

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 185595	A	19860625	EP 85402588	A	19851220	198626	B
FR 2575180	A	19860627	FR 8419601	A	19841220	198632	
AU 8551547	A	19860626				198633	
DK 8505940	A	19860621				198638	
JP 61180795	A	19860813	JP 85285912	A	19851220	198639	
BR 8506398	A	19860902				198642	
FI 8505064	A	19860621				198643	
US 4849023	A	19890718	US 88143273	A	19880106	198936	
CA 1266644	A	19900313				199018	
EP 185595	B	19910403				199114	
DE 3582416	G	19910508				199120	

KR 9303490	B1	19930501	KR 859621	A	19851220	199421
JP 2749570	B2	19980513	JP 85285912	A	19851220	199824
EP 185595	B2	19981209	EP 85402588	A	19851220	199902

Priority Applications (No Type Date): FR 8419601 A 19841220

Cited Patents: A3...8716; DE 2034700; EP 72080; FR 2000580; FR 2000581; FR 2201042; FR 2275555; FR 2454630; FR 2499576; No-SR.Pub; US 4346116

#### Patent Details:

Patent No	Kind	Lang	Pg	Main IPC	Filing Notes
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EP 185595	A	F	30		
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Designated States (Regional): BE CH DE FR GB IT LI NL SE

EP 185595	B				
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Designated States (Regional): BE CH DE FR GB IT LI NL SE

JP 2749570	B2	13	C07H-015/04	Previous Publ. patent	JP 61180795
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EP 185595	B2	F	C07H-001/08		
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Designated States (Regional): BE CH DE FR GB IT LI NL SE

KR 9303490	B1		C07H-003/04		
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#### Abstract (Basic): EP 185595 B

Simultaneous prodn. of a maltitol-rich prod. (I) and a maltotriitol-rich prod. (II) is effected by catalytically hydrogenating a syrup contg. at least 50% maltose and chromatographically fractionating the prod.

Pref. fractionation conditions are such that (I) contains, on a dry basis, at least 87 (esp. 87-95.5) wt.% maltitol, less than 1 (esp. less than 0.6) wt.% of polyols with a DP of 4 or more, less than 5 (esp. less than 2), wt.% sorbitol and 2.5-13% maltotriitol.

USE/ADVANTAGE - (I) is useful as a starting material for prodn. of crystalline maltitol or as a sweetener or humectant in foodstuffs, chewing gum, pharmaceutical prods., etc. The process gives a maltitol-rich syrup which is practically free of oligomers with a DP of 4 or more and contains very little sorbitol and maltotriitol. (30pp Dwg.No.0/2)

#### Abstract (Equivalent): EP 185595 B

Process for the simultaneous preparation of a syrup rich in maltitol suitable to obtain crystallised maltitol and of a syrup rich in maltotritol comprising: the liquefaction of a starch milk, the treatment of the liquefied starch milk by the action of a saccharifying enzyme in order to obtain a maltose syrup, the catalytic hydrogenation of the said maltose syrup with Ruthenium or Raney nickel catalysts in order to obtain a maltitol syrup, the said process being characterised by the fact that a starch milk having a dry matter content of 25 to 45% by weight is subjected to a liquefaction until a Dextrose - Equivalent value equal or higher than 2, that the liquefied starch milk is subjected to an enzymatic saccharification until obtention of a maltose syrup having a maltose content from only 50 to to 80% by weight, that the said maltose syrup is hydrogenated by enzymatic route in order to obtain a maltitol syrup, this syrup containing also sorbitol, maltotritol and polyols of degree of polymerisation greater than or equal to 4, that the said maltitol syrup is submitted to a chromatographic fractionation providing a fraction rich in sorbitol, a fraction rich in polyols of degree of polymerisation greater than or equal to 4, a fraction of syrup rich in maltotritol and a fraction of syrup rich in maltitol, the process conditions of the said chromatographic fractionation step being selected in such a way that the said fraction of syrup rich in maltitol comprises, the percentages being expressed by weight on the basis of

the dry matter content: at least 87% of maltitol, preferably from 87 to 97.5% and, still more preferably, from 87 to 95.5%, less than 1% of polyols of degree of polymerisation greater than or equal to 4, preferably less than 0.70% and, still more preferably, less than 0.60%, less than 5% of sorbitol, preferably less than 3% and, still more preferably, less than 2%, a proportion of maltotritol comprises between 2.5% and 13% and that the said fraction of syrup

Abstract (Equivalent): US 4849023 A

Syrup rich in maltitol proper is prepd. by (a) liquefying a starch milk; (b) forming maltose syrup by adding a saccharifying enzyme; and (c) catalytically hydrogenating syrup using ruthenium or Raney nickel to form prod. Starch milk used has dry matter content of 25-45 wt.% and is liquefied to dextrose equiv. 2-25. Saccharification comprises use of vegetable or bacterial beta-amylase to form a syrup contg. 50-80 wt.% maltose. Maltose syrup is hydrogenated to a prod. also contg. sorbitol, maltotriol and polyols of deg. of polymerisation 4 or more. Maltose syrup is opt. chromatographically fractionated to form fractions rich in these by-prods., such that maltitol-rich fraction contains 87 wt.% or more maltitol, less than 1 wt.% of polyols, less than 5 wt.% of sorbitol, and 2.5-13 wt.% of maltotriitol. Maltitol-rich fraction is collected.

USE - As sweetening or moistening agent in edible prods., e.g. confectionery, pastries, creams, drinks, jams, etc. (11pp)i

Derwent Class: B03; D13; D17; E13

International Patent Class (Main): C07H-001/08; C07H-003/04; C07H-015/04

International Patent Class (Additional): A23G-003/00; A23L-001/23;

A23L-001/236; C07C-027/00; C07H-001/00; C07H-003/00; C12P-019/22;

C13K-001/08; C13K-013/00

36/7/30 (Item 22 from file: 351)

DIALOG(R)File 351:Derwent WPI

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004623462

WPI Acc No: 1986-126805/198620

Hydrogenated hydrolysed polysaccharide - for use in prepn. of transparent tooth pastes

Patent Assignee: UNILEVER NV (UNIL )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
ES 8602833	A	19860316	ES 532643	A	19840518	198620 B

Priority Applications (No Type Date): ES 532643 A 19840518; US 83485913 A 19830418

Abstract (Basic): ES 8602833 A

The process consists of (a) partial hydrolysis of a poly-saccharide, pref. starch from maize, potato, rice or wheat, until 30-40 wt.% of the mixt. is in the form of oligo-saccharides with 3 glucose units minimum; (b) hydrogenating the reaction mass using a suitable catalyst, to obtain a hydrogenated hydrolysate contg. at least 20-30 wt.% oligo-saccharides with 10 glucose units, 25% max. of mannitol, 30% approx. sorbitol, less than 40% DP, and DP2, 30-40% DP3 to DP9, and 20-30% DP10 or more.

Derwent Class: D17; D21



International Patent Class (Additional): A61K-007/16; C07H-003/06

36/7/31 (Item 23 from file: 351)  
DIALOG(R)File 351:Derwent WPI  
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002499938

WPI Acc No: 1980-17953C/198010

Sugar alcohol medicinals and intermediates prodn. - by hydrogenation of monosaccharide using Raney nickel or noble metal catalyst

Patent Assignee: VITAMIN RES INST (VITA-R)

Inventor: GRIGOREV G L; LISNYANSK I M; VERENIKINA S G

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
SU 670557	A	19790630				198010 B

Priority Applications (No Type Date): SU 2513070 A 19770728

Abstract (Basic): SU 670557 A

Sugar alcohols, useful as intermediates and pharmaceuticals, are prepd. by catalytic hydrogenation of monosaccharides or hydrolysates of oligo- or polysaccharides. The reaction is conducted with intensive stirring (Re 10000-20000) at elevated temp. and pressure in the presence of 5-10 wt.% Raney nickel or 0.05-0.5 wt.% noble metal (the amt. of catalyst is based on wt. of sugar).

The process is simplified and prod. purity is increased if the catalyst is previously activated with hydrogen to optimal potential value at 80-130 degrees C and 20-60 atmos. and catalyst suspension pH 6-11. The sugar soln. at 50-60 degrees C and pH 5-8 is passed at a rate producing potential shift of 10-100 mV.

The method accelerates the hydrogenation of monosaccharides without byprod. formation. Typically, sorbital was obtd. in 99.6% yield after 15 min. hydrogenation of glucose over Ni catalyst.

Derwent Class: B05

International Patent Class (Additional): A61K-031/70; C07C-031/26

36/7/32 (Item 24 from file: 351)  
DIALOG(R)File 351:Derwent WPI  
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001213879

WPI Acc No: 1974-87784V/197451

Non-reducing starch hydrolysate - prepd. by hydrolysing starch dispersion in presence of alpha-amylase then hydrogenating

Patent Assignee: NIKKEN CHEM CO LTD (NIKM)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 49047547	A	19740508				197451 B

Priority Applications (No Type Date): JP 7291087 A 19720911

Abstract (Basic): JP 49047547 A

A starch dispersion is hydrolyzed in the presence of

alpha-amylase to de <3, heated under pressure , hydrolyzed again in the presence of fresh alpha-amylase to de 5-18, and hydrogenated in the presence of reduction catalysts to give nonreducing product with good degrdn. resistance during aging. Thus, a 18 degrees Be. tapioca starch dispersion was adjusted to pH 5.8 and hydrolyzed in the presence of 0.1% (based on dry starch ) alpha-amylase at 85-7 degrees to de 1.9, heated in an autoclave at 140 degrees, cooled to 83 degrees, hydrolyzed in the presence of 0.15% (based on solids) alpha-amylase to de 8.3, filtered, deionized, condensed under reduced pressure to 50% solids, hydrogenated in the presence of Raney Ni at 130 degrees, filtered, deionized, and spray dried to give a product contg. 0.07% (based on glucose) reducing sugar.

Derwent Class: D16; D17

36/7/33 (Item 25 from file: 351)  
DIALOG(R)File 351:Derwent WPI  
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000954430

WPI Acc No: 1973-31674U/197322

Sorbitol prodn - by catalytic reduction of liquefied starch

Patent Assignee: TAKEDA CHEM IND LTD (TAKE )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 73016888	B					197322 B

Priority Applications (No Type Date): JP 6842707 A 19680620

Abstract (Basic): JP 73016888 B

Liquid starch obtd. by contacting starch with a liquifying enzyme is hydrogenated over a catalyst mixt. of a Ni catalyst and the sulphate of Zn, Al, Fe or Co. Prefd. enzyme is amylase and sorbitol yield is quantitative. No gelling occurs so process can be continuous.

Derwent Class: E17

International Patent Class (Additional): B01J-011/00; C07C-031/26

36/7/34 (Item 26 from file: 351)  
DIALOG(R)File 351:Derwent WPI  
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000681173

WPI Acc No: 1970-17859R/197011

Pure amylitol prepn - by catalytic hydrogenation of amylose

Patent Assignee: HAYASHIBARA CO (HAYB )

Number of Countries: 004 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 1931082	A	19700312				197011 B
FR 2011233	A					197021
GB 1280001	A					197227
JP 74048506	B	19741221				197504

Priority Applications (No Type Date): JP 6842762 A 19680619

Abstract (Basic): DE 1931082 A

Pure amylitol prepn by catalytic hydrogenation of amylose. G5-. Obtained from starch by (A):(a) selectively hydrolysing the alpha-1,6-glucoside linkages of the side chains of amylopectin, by the action of alpha-1,6-glucosidase, in a solution of amylopectin-containing starch ; and (b) precipitating the so-obtained amylose; thereafter (B):(a) catalytically hydrogenating the amylose; thereafter (B):(a) catalytically regular chain-length; and finally (b) purifying the so-obtained amylitol by means of an ion exchange resin.

The intermediate product (amylose) is of low-molecular wt. with regular chain length, and can therefore easily be reduced to a stable alcohol with reproducible characteristics. Separation of the amylose from the amylopectin in the starting material ( starch ) is relatively easy.

In step (A), a thermally gelatinised starch slurry is liquefied by heating at 125 degrees C for about 30 mins. whereafter hydrolysis is carried out. Hydrogenation in step (B) is effected at 95 - 100 degrees C under pressure between 70 and 80 kg/cm2, by introduction of hydrogen.

Derwent Class: D17

International Patent Class (Additional): C08B-019/04; C08L-000/00

36/7/35 (Item 27 from file: 351)

DIALOG(R)File 351:Derwent WPI

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000529174

WPI Acc No: 1966-29744F/196800

Process for sorbitol a non-fermentable non-hygroscopic

Patent Assignee: LYCKEY STAERKELSEFOERAEDLING (LYCK )

Number of Countries: 003 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
CA 770081	A					196800 B
US 26959	E					197039
NL 137813	B					197305

Priority Applications (No Type Date): SE 634950 A 19630506

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
CA 770081	A		28		

Abstract (Basic): CA 770081 A

Process for prep. of sweet, non-fermentable, non-hygroscopic sugar substitute by saccharification of a polysaccharide giving dextrose, maltose or dextrose and maltose or by saccharification of starch or cellulose to give a product having a dextrose equivalent of 15-75% and containing water sol dextrans, catalytically hydrogenating the mixture to sorbitol.

The sorbitol produced is only weakly hygroscopic and has virtually no laxative action unlike sorbitol made by usual process. solution after hydrogenation can be evap. to solid mouldable mass stable in moist atmosphere

Derwent Class: B00

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